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Prof. Emmons exhibited a drawing of a fossil head, supposed to belong to Clepsysaurus, found in Chatham Co., North Carolina: it was covered with plates, some of which were exhibited, and had a very elongated slender snout, expanded at the tip, with the nostrils situated at the base.

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*May* 24*th*.

Mr. Lea, President, in the Chair.

Seventy-seven members present.

A paper was presented for publication in the Proceedings, entitled Ichthyological Notices by Charles Girard, M. D.

And one for publication in the Journal, entitled New Unionidæ of the United States, by Isaac Lea.

Which were referred to Committees.

The death, at Berlin, of Baron Alexander von Humboldt, late a Correspondent of the Academy, was announced.

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*May* 31*st*.

Vice-President Bridges in the Chair.

Fifty-one members present.

The Report of Proceedings of the Biological Department for the present month was read.

On report of committees of the Biological Department, the papers entitled, The Pathological Relations of Cancer, by J. H. Packard, M.D., and On two new varieties of Wourari, Carroval and Vao, by William A. Hammond, M. D., and S. Weir Mitchell, M. D., were recommended for publication in a medical journal.

On report of the respective Committees, the paper entitled, New Unionidæ, of the United States, by Isaac Lea, was ordered to be published in the Journal.

And the following in the Proceedings:

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## Descriptions of Twenty-one New Species of Exotic UNIONIDÆ.

BY ISAAC LEA.

Unio sikkimensis.—Testâ lævi, obovatâ, inæquilaterali, subinflatâ, posticè obtusè biangulatâ; valvulis crassiusculis; natibus prominulis; epidermide luteo-fuscâ, eradiatâ; dentibus cardinalibus parvulis, brevibus crenulatis, in utroque valvulo duplicibus; lateralibus brevibus subcurvisque; margaritâ albâ et iridescente.

*Hab.*—Sikkim, India. H. Cuming and Prof. Hanley.

Unio diminutis.—Testâ plicatâ, corrugatâ, subsulcatâ, ellipticâ, inæquilaterali, compressâ, posticê obtusè angulatâ; valvulis crassiusculis; natibus subprominentibus, ad apices undulatis acuminatisque; epidermide luteâ eradiatâque; dentibus cardinalibus parviusculis, compressis, erectis, crenulatis, in utroque valvulo duplicibus; lateralibus subbrevibus rectisque; margaritâ pallido-salmoniâ et iridescente.

*Hab.*—East Africa. H. Cuming and Prof. Hanley.

Unio plicatulus.—Testâ minutè plicatâ, valdè oblongâ, compressâ, valdè inæquilaterali, posticè obtusè angulatâ; valvulis tenuibus; natibus prominulis; epidermide luteo-fuscâ, radiatâ; dentibus cardinalibus obliquis, lamellatis, longis, pertenuibus, dente cardinali valvulæ dextræ duplici; lateralibus longis, acicularis rectisque; margaritâ cæruleo-albâ et valdè iridescente.

*Hab.*—Borneo. H. Cuming.

Unio navigioliformis.—Testâ minutè plicatâ, valdè oblongâ, subinflatâ, valdè inæquilaterali, posticè truncatâ et subemarginatâ, ad basim emarginatâ, anticè ovato-rotundatâ; valvulis crassiusculis; natibus prominulis; epidermide tenebroso-fuscâ, eradiatâ, micante; dentibus cardinalibus crassiusculis, obliquis, compressis, in utroque valvulo duplicibus; lateralibus prælongis subcurvisque; margaritâ albâ et iridescente.

*Hab.*— ——? H. Cuming.

Unio fluctiger.—Testâ perplicatâ, subtransversâ, compressâ, valdè inæquilaterali, posticè subrotundatâ, ad basim subemarginatâ; valvulis tenuibus; natibus parvis, prominulis; epidermide luteo-olivâ, transversè et minutè striatâ, eradiatâ; dentibus cardinalibus parvis, obliquis, compressis, in utroque valvulo duplicibus; lateralibus longis subrectisque; margaritâ cæruleo-albâ et iridescente.

*Hab.*— ——? H. Cuming.

Unio mutabilis.—Testâ lævi, latè ellipticâ, subcompressâ, valdè inæquilaterali, ad basim subrectâ; valvulis tenuibus, anticè crassioribus; natibus prominulis, ad apices undulatis, ferè terminalibus; epidermide castaneâ, nitidâ et eradiatâ; dentibus cardinalibus parvis, in utroque valvulo duplicibus; lateralibus prælongis subcurvisque; margaritâ cæruleo-albâ et valdè iridescente.

*Hab.*—Brisbane Water, Australia; New Zealand, H. Cuming; and Murray River, Australia, W. Newcomb, M. D.

Unio Thwaitsii.—Testâ lævi, regulariter ellipticâ, subinflatâ, inæquilaterali; valvulis crassiusculis; natibus prominulis; epidermide castaneâ, politâ, transversè fasciatâ; dentibus cardinalibus valdè compressis, lamellatis, valdè obliquis, in utroque valvulo duplicibus; lateralibus longis, lamellatis curvisque; margaritâ salmonis colore tinctâ et iridescente.

*Hab.*—Ceylon. Mr. Thwaites, by H. Cuming.

Unio melleus.—Testâ sulcatâ, ellipticâ, subinflatâ, valdè inæquilaterali; valvulis subcrassis, anticè crassioribus; natibus subprominentibus, ad apices minutè undulatis; epidermide melinâ, obsoletè radiatâ, nitidâ; dentibus cardinalibus subgrandibus, erectis, crenulatis, in utroque valvulo duplicibus; lateralibus sublongis, subrectis, in utroque valvulo duplicibus; margaritâ salmonis colore tinctâ et iridescente.

*Hab.*— ——? H. Cuming.

Unio Dysonii.—Testâ sulcatâ, ellipticâ, subinflatâ. inæquilaterali, posticè subbiangulari; valvulis subcrassis, anticè crassioribus; natibus prominulis, ad apices lævibus; epidermide stramineâ, eradiatâ; dentibus cardinalibus crassiusculis, erectis, crenulatis, in utroque valvulo duplicibus; lateralibus longis subcurvisque; margaritâ argenteâ et valdè iridescente.

*Hab.*—Honduras. D. Dyson.

Unio Demararaensis.—Testâ sulcatâ, rhomboido-oblongâ, subinflatâ, inæquilaterali, posticè obtusè angulatâ; valvulis crassiusculis; natibus prominulis, ad apices undulatis divergentibus; epidermide olivo-fuscâ, eradiatâ; dentibus cardinalibus crassiusculis, erectis, striatis, in utroque valvulo duplicibus: lateralibus longis subcurvisque; margaritâ albâ et iridescente.

*Hab.*—Demarara. H. Cuming.

Unio Mauritianus.—Testâ lævi, ellipticâ, compressâ, inæquilaterali; valvulis pertenuibus; natibus prominulis; epidermide olivo-luteâ, nitidâ, obsoletè ra-

diatâ; dentibus cardinalibus minimis, compressis, obliquis; lateralibus longis, acicularis subcurvisque; margaritâ albâ et paulisper iridescente.
*Hab.*—Island of Mauritius. H. Cuming.

Unio vittatus.—Testâ crebrè et leviter sulcatâ, ellipticâ, inflatâ, inæquilaterali; natibus prominentibus; epidermide luteo-olivâ, nitidâ, eradiatâ, transversè vittatâ; dentibus cardinalibus sublongis, compressis, obliquis; lateralibus longis, lamellatis subcurvisque; margaritâ albâ et iridescente.
*Hab.*—Australia. H. Cuming.

Unio persulcatus.—Testâ crebrè sulcatâ, oblongâ, valdè inæquilaterali, compressâ, posticè subangulatâ; valvulis subcrassis; natibus prominulis; epidermide virido-fuscâ, radiis capillaris; dentibus cardinalibus magnis, sulcatis crenulatisque; lateralibus sublongis rectisque; margaritâ purpureâ et valdè iridescente.
*Hab.*—Mexico. Prof. Hanley.

Unio Shanghaiensis.—Testâ lævi, valdè transversâ, valdè inæquilaterali, inflatâ, cylindraceâ, posticè subbiangulatâ; valvulis crassiusculis, anticè crassioribus; natibus subprominentibus, ad apices corrugatis et plicatis; epidermide tenebroso-olivâ, nitidâ, obsolete radiatâ; dentibus cardinalibus parviusculis, compressis, crenulatis, rectis, in utroque valvulo duplicibus; lateralibus prælongis, lamellatis rectisque; margaritâ argenteâ et valdè iridescente.
*Hab.*—Shanghai, China. H. Cuming.

Unio Layardii.—Testâ lævi, ellipticâ, inflatâ, posticè obtusè angulatâ, anticè regulariter rotundatâ, subæquilaterali; valvulis crassiusculis; natibus prominulis; epidermide valdè politâ, micante, tenebroso-fuscâ, nigricante; dentibus cardinalibus longis, lamellatis, obliquis, in valvulam dextram duplicibus; lateralibus longis subcurvisque; magaritâ albâ et iridescente.
*Hab.*—Ceylon. Frederick Layard.

Unio japanensis.—Testâ plicatâ, oblongâ, anticè subsulcatâ, subcompressâ, posticè subbiangulatâ, valdè inæquilaterali; valvulis crassiusculis, anticè paulisper crassioribus; natibus prominulis; epidermide tenebroso-fuscâ, micante; dentibus cardinalibus subgrandibus, elevatis, crenulatis, in utroque valvulo duplicibus; lateralibus longis subcurvisque; margaritâ albâ et valdè iridescente.
*Hab.*—Japan. H. Cuming.

Unio Sumatrensis.—Testâ plicatâ, subtriangulari, subventricosâ, posticè subbiangulatâ, inæquilaterali; valvulis subcrassis; natibus subprominentibus; epidermide micante, luteo-olivâ, posticè virente; dentibus cardinalibus lamellatis, compressis, obliquis, in utroque valvulo duplicibus; lateralibus subbrevibus curvisque; margaritâ albâ et iridescente.
*Hab.*—Sumatra. H. Cuming.

Unio Rowellii.—Testâ sulcatâ, ellipticâ, subinflatâ, posticè obtusè angulatâ, inæquilaterali; valvulis subcrassis, anticè paulisper crassioribus; natibus prominulis, ad apices undulatis; epidermide rufo-fuscâ, obsoletè radiatâ; dentibus cardinalibus compressis, elevatis, crenulatis, in utroque valvulo duplicibus, lateralibus subrectis sublongisque; margaritâ albâ et iridescente.
*Hab.*—Chagres River, New Granada. Rev. Joseph Rowell.

Unio Wilsonii.—Testâ crebrè et leviter sulcatâ, transversè ellipticâ, subinflatâ, valdè inæquilaterali; valvulis tenuibus; natibus prominentibus, ad apices lævibus; epidermide olivo-viridescente, nitidâ, obsoletè radiatâ; dentibus cardinalibus parvis, lamellatis et obliquis; lateralibus longis, acicularis subrectisque; margaritâ cæruleo-albâ et iridescente.
*Hab.*—Eastern Branch of Isaac's Plain. New South Wales, T. B. Wilson, M. D.

Anodonta Dahomeyensis.—Testâ lævi, transversâ, subinflatâ, ad latere compressâ, ad basim emarginatâ, valdè inæquilaterali; valvulis tenuibus; natibus subprominentibus; epidermide tenebroso-olivâ, striatâ, eradiatâ; margaritâ cæruleo-albâ et iridescente.
*Hab.*—Dahomey, West Africa. Mr. Fraser, by H. Cuming.

Anodonta Senegalensis.—Testâ lævi, transversâ, subinflatâ, ad latere vel planulatâ vel compressâ, ad basim subemarginatâ, valdè inæquilaterali; valvulis crassiusculis; natibus subprominentibus, ad apices minutè et obliquè undnlatis; epidermidè tenebroso-viridescente, nitidâ, eradiatâ; margaritâ vel cæruleo-albâ vel salmonis colore tinctâ et iridescente.
*Hab.*—Senegal. J. C. Jay, M. D., E. Verreaux and H. Cuming.

## Descriptions of Two New Species of UNIONES, from Georgia.

BY ISAAC LEA.

Unio fibuloides.—Testâ lævi, subrotundâ, inflatâ, subæquilaterali; valvulis crassis, anticè paulisper crassioribus; natibus crassis et valdè prominentibus; epidermide vel fuscâ vel luteo-fuscâ, anticè striatâ; dentibus cardinalibus crassis, compressis crenulatisque; lateralibus curtis, crassis, rectis granulatisque; margaritâ albâ et iridescente.
*Hab.*—Connasauga River, Georgia. Bishop Elliott.

Unio compactus.—Testâ lævi, triangulari, subinflatâ, ad latere planulatâ, posticè angulatâ, inæquilaterali; valvulis crassis; natibus elevatis; epidermide luteo-olivâ, radiis maculatis capillaris creberrimis; dentibus cardinalibus parvis, erectis, in utroque valvulo duplicibus; lateralibus curtis, crassis rectisque; margaritâ albâ et iridescente.
*Hab.*—Etowah River, Georgia. Bishop Elliott, and Rev. G. White.

## Descriptions of seven new species of UNIONES from South Carolina, Florida, Alabama and Texas.

BY ISAAC LEA.

Unio cacao.—Testâ lævi, oblongâ, subquadratâ, compressâ, ad latere planulatâ, posticè obtusè angulatâ, inæquilaterali; valvulis subcrassis, anticè crassioribus; natibus prominulis; epidermide castaneâ, supernè micante, infernè striatâ; dentibus cardinalibus crassiusculis, striatis, suberectis, in utroque valvulo duplicibus; lateralibus curtis, lamellatis rectisque; margaritâ purpurescente et valdè iridescente.
*Hab.*—Chacktahachie River, West Florida. Major Le Conte.

Unio hepaticus.—Testâ lævi, ovato-oblongâ, compressâ, posticè latè biangulatâ, inæquilaterali; valvulis subtenuibus; natibus prominulis; epidermide micante, hepaticâ, vel eradiatâ vel obsoletè radiatâ; dentibus cardinalibus parvis, subelevatis, striatis, in utroque valvulo duplicibus; lateralibus longis, lamellatis subrectisque; margaritâ pupurescente et valdè iridescente.
*Hab.* Salkakatche River, South Carolina. J. Postell.

Unio viridiradiatus.—Testâ lævi, latè ellipticâ, compressâ, posticè dilatatâ et obtusè angulatâ, anticè regulariter rotundatâ, valdè inæquilaterali; valvulis subtenuibus; natibus prominulis, ad apices minutè et irregulariter undulatis; epidermide subnitidâ, radiis crebris capellaris; dentibus cardinalibus parvis, crenulatis, in utroque valvulo duplicibus; lateralibus longis, lamellatis subrectisque; margaritâ purpureâ et valdè iridescente.
*Hab.* Big Uchee, Alabama, near Columbus, Georgia. G. Hallenbeck.

Unio macrodon.—Testâ lævi, triangulari, compressâ, subæquilaterali, posticè

ângulatâ; valvulis subcrassis; natibus subelevatis, ad apices minutè undulatis; epidermide luteolâ, striatâ; dentibus cardinalibus permagnis, subcompressis, elevatis, obliquis crenulatisque; lateralibus longis rectisque; margaritâ argenteâ et iridescente.

*Hab.* Rutersville, Texas. Prof. C. G. Forshey.

Unio Houstonensis.—Testâ lævi, subrotundâ, subinflatâ, æquilaterali, ad latere paulisper planulatâ; valvulis subcrassis, anticè crassioribus; natibus elevatis, ad apices paulisper undulatis; epidermide lævi, virido-luteâ, vel eradiatâ vel obsoletè radiatâ; dentibus cardinalibus magnis, erectis, crenulatis; lateralibus curtis subrectisque; margaritâ argenteâ et iridescente.

*Hab.* Houston, Texas. F. Moore, M. D.

Unio Rutersvillensis.—Testâ lævi, transversè ellipticâ, subinflatâ, valdè inæquilaterali, posticè obtusè angulatâ; valvulis subtenuibus, anticè paulisper crassioribus; natibus prominulis, ad apices regulariter et elegantissimè undulatis; epidermide vel fuscâ vel luteo-fuscâ et valdè radiatâ; dentibus cardinalibus parvis, compressis, acuminatis, crenulatis, in utroque valvulo duplicibus; lateralibus longis, lamellatis subcurvisque; margaritâ ceruleo-albâ et valdè iridescente.

*Hab.* Rutersville, Fayette Co., Texas. Prof. C. G. Forshey.

Unio Forsheyi.—Testâ valdè et minutè tuberculatâ, subquadrangulari, compressâ, subequilaterali, posticè subbiangulatâ; valvulis subcrassis, anticè crassioribus; natibus subelevatis, ad apices acuminatis et elegantissimè perundulatis; epidermide virido-luteâ, substriatâ, obsoletè radiatâ, submicante; dentibus cardinalibus subgrandibus, erectis, crenulatis, in utroque valvulo duplicibus, lateralibus rectis brevibusque; margaritâ argenteâ et paulisper iridescente.

*Hab.* Fayette Co., Texas. Prof. C. G. Forshey.

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## Description of a Third Genus of HEMIRHAMPHINÆ.

BY THEO. GILL.

After the transmission to the Academy of Natural Sciences of the paper descriptive of the genus *Hyporhamphus*, Mr. James C. Brevoort placed in my hands a species closely resembling those fishes which have been described as *Hemirhamphus longirostris* and *H. macrorhynchus.* Mr. Brevoort at the same time called my attention to the peculiar dentition of the species, there being evidently tricuspidate teeth in the lower jaw, while those in the upper were simply conical. On an examination of the descriptions of the above mentioned species, as given in the " Histoire Naturelle des Poissons," it is to be remarked that no allusion is made to the *shape* of the teeth, but that they are in each described as being very fine, immediately after the statement of the size of the upper jaw. It is then to be presumed that M. Valenciennes only noticed the conical teeth, for one of the characters that he has given of the genus is founded on the presence of granular or conical ones. Could Valenciennes have overlooked the teeth of the lower jaw, and only examined those of the upper? It appears to me possible that he did, for it is scarcely to be believed that a fish so closely resembling *Hemirhamphus longirostris* as the present species, could differ from it in such important parts. I nevertheless offer this opinion with diffidence. As Valenciennes has remarked, the teeth are very small, and as their forms can only be discerned through a magnifier, they might have been easily overlooked, unless the attention of the observer was particularly attracted to them. The peculiarity of the different structure of the teeth in each jaw would scarcely have been suspected by the naturalist as occurring in this tribe. If this supposition is correct, as to the *Hemirhamphus longirostris* and *H. macrorhynchus*, those species should be withdrawn from the genus *Hemirhamphus* and placed in an allied one. Valenciennes would probably have himself done this, if he had been aware that any such peculiarity as that signalized had existed. Certain it is, that the species to be now described differs from *Hemirhamphus*, not only in the dentition, but even more strikingly in general form, which at once distinguishes it from that genus, as it should be restricted, and approximates it to the long billed and slender *Hemirhamphus longirostris*. In the typical *Hemirhamphi* the body, although elongated and nearly uniform, is quite robust. In the present genus (*Euleptorhamphus*) the proportional height is about half of that in *Hemirhamphus*, and the beak is also much elongated. The pectorals are again much longer than those of *Hemirhamphus*, and are pointed at their extremities, and they have been even compared by Valenciennes to those of the *Exocœti*. These characters sustain us in the belief that it forms the type of a natural genus, and we now give its *generic* characters, those appertaining to the subfamily being omitted.

### EULEPTORHAMPHUS Gill.

Body very slender and elongated, covered with large and high scales. The ensiform, lower jaw, very long and slender, greatly exceeding the length of the head. Teeth very small and panciserial in each jaw, tricuspidate in the lower and subconical in the upper. Pectoral fins elongated and pointed. Anal with all its rays, except the most anterior, simply branched.

### EULEPTORHAMPHUS BREVOORTII Gill.

The height between the vertical fins is contained between twelve and thirteen times in the length from the opercular margin to the base of the caudal fin. The head, from the end of the upper jaw to the margin of the operculum bears a proportion to the length of the trunk of one to six and a third. The beak forms about three-tenths of the *extreme length* inclusive of the caudal fin.

The eye is moderate, its diameter forming little, if at all, more than a fourth of the head's length (exclusive of the beak). The interorbital space is equal to a diameter. The pectorals slightly exceed three-elevenths of the length of the trunk. The ventrals are nearer to the margin of the operculum than to that of the caudal fin, and are very small, their length only equalling a sixth of the pectorals. The dorsal commences nearer to the point of the caudal than to the bases of the pectorals; its base is about as long or even longer than the length of the pectorals; about three of its rays are in advance of the anal, and its last ray is above or a little behind that of the same fin.

In the number of rays this species does not differ essentially from its congeners.

D 22; A 22; C 3, I, 8, 9, I, 5; P 8; V 6.

The scales appear to be firmly adherent to the body, especially on the silvery portion. The color is tawny-yellow on the back and inferiorly on the tail; the head and the rest of the sides are brilliant silvery; the silvery band is quite straight above; the beak is light or tawny-brown.

It appears that *Euleptorhamphus Brevoortii* is consequently more nearly allied to *E. longirostris* of Cuvier than to the *E. macrorhynchus*, the former offering no important difference in its relative height, which is said to be comprised thirteen times in the trunk, measured from the operculum to the root of the tail; in *E. macrorhynchus* the height is not comprised much more than nine times in the same length. With the latter, it is therefore unnecessary to compare the present species; from the former, it appears to differ specifically in some of its proportions. The beak in *E. longirostris* is said to be a quarter of the entire length; in *E. Brevoortii* it is three-tenths, or a little less than a third, and is consequently almost as long proportionally as *E. macrorhynchus*. The eye in *E. longirostris* is a third of the head's length in diameter; in *E. Brevoortii* it is only a quarter. The other variations in dimensions would not be sufficient to specifically distinguish the two fishes, but as they do not very widely differ in size, the variations that have been stated appear to be specific and not the results of age. Valenciennes says that the scales of E. longirostris appeared to him to fall easily. The scales of E. Brevoortii appear to me to be more than usually adherent. If we are both correct, this difference will be important as specific. The two fishes finally appear to differ in color, but the one that has been above described has been apparently long preserved in alcohol.

The habitat of this species is unknown; the species allied to it have been hitherto found only in the Oriental seas.

## ICHTHYOLOGICAL NOTICES.

BY CHARLES GIRARD, M. D.

LX. A species of *Fundulus*, closely allied to *F. grandis*, and of which we have given a good figure of either sex, on Plate xxxvi of the "Ichthyology of the United States and Mexican Boundry," was recently collected in Charlotte Bay, Fla., and sent to the Smithsonian Institution.

The specimens obtained are of the male sex, the largest one measures four inches and a half in total length, the head forming a little more than the fourth of it. The eye is large and circular, the diameter of the orbit entering about four times in the length of the side of the head. The maxillar teeth are rather small and inconspicuous. The body has not the plump appearance of *F. grandis*; its greatest depth is less than the fourth of the total length. The dorsal and anal fins are narrower than in *F. grandis*. The anterior margin of the anal is nearer the posterior margin of the caudal than the apex of the snout; that of the anal is equidistant between the pupil and the margin of the caudal. The latter is rounded off or subtruncated. The anal is inserted somewhat more anteriorly with reference to the dorsal than in *F. grandis*, and the tips of the rays of the dorsal project a little further than those of the anal fin. The ventrals are possibly smaller than in *F. grandis*, their extremities not reaching quite the vent. The pectorals are of moderate size and extend as far back as a vertical line drawn at the origin of the ventrals. The rays are :— D 12; A 11; C 2, 1, 8, 8, 1, 2; V 6 ; P 1, 16. The scales are deeper than long, but proportionally less so than in F. *grandis*. The head, dorsal region and flanks are blackish brown, metallic white spots being scattered over the sides of the body and tail. The abdomen is yellowish white The dorsal, caudal, and anal fins olivaceous, checkered with black and white, the ventrals and pectorals being olivaceous.

The name of *Fundulus floridensis* is bestowed upon this species.

LXI. We owe to our friend Dr. Thomas Webb, a species of *Cyprinodon*, collected by him in the neighborhood of San Diego, Cal., while attached to the U. S. and Mexican Boundary, under ex-Commissioner R. R. Bartlett.

It may easily be distinguished from its congeners in North America, by its uniform system of coloration which exhibits neither bands nor spots. The general aspect of its body is rather short and deep, except in the young which assume a subfusiform appearance. The largest specimens which we have examined measure about an inch and a half in total length. The head constitutes the fourth of the length, the snout being abruptly rounded off. The mouth is, proportionally speaking, of medium size; whilst the eye is rather small, subcircular; its diameter entering three times and a half in the length of the side of the head. The dorsal fin is higher than long, and superiorly convex; its anterior margin being nearer the apex of the snout than the posterior margin of the caudal. The anal fin is nearly as large as the dorsal, deeper than long, inferiorly convex, particularly upon its posterior half. The caudal is posteriorly truncated, nearly linear. The ventrals are small, project beyond the vent and reach almost the origin of the anal. The pectorals are well developed, rounded off, extending as far as a vertical line drawn at the insertion of the ventrals. The rays are :—D 10 + 1; A 11; C 3, 1, 8, 8, 1, 3; V 7; P 12.—The scales are much deeper than long, anteriorly truncated and posteriorly rounded off or convex. The color is olivaceous brown, with a dark greyish tint along the back, and a golden tint beneath.

We propose calling this species *Cyprinodon californiensis.*

LXII. Another *Cyprinodon*, the largest species so far observed in North America, was collected by Mr. John Potts, in Chihuahua river. Specimens of the male sex measure two inches and a half in total length. The head, which constitutes somewhat more than the fourth of the total length, is rather large, the snout being abbreviated and rounded off. The eye is of moderate development, since its diameter enters four times in the length of the side of the head. The mouth is of medium size. The dorsal region between the nape and the origin of the dorsal fin is very convex ; the depth, measured across the latter region, is a good deal more than the third of the total length. The origin of the dorsal fin is nearer the insertion of the caudal fin than the apex of the snout, the fin itself is higher than long, superiorly convex, the first and second rays being the shortest. The posterior margin of the caudal is subtruncated. The anal has the same shape and structure as the dorsal, but is a much smaller fin. The ventrals overlap the vent, reaching almost the anterior margin of the anal. The pectorals are well developed, rounded off, and extend further back than a vertical line drawn at the insertion of the ventrals. The rays are :—D 12 ; A 12 ; C 5 1, 7, 7, 1, 4 ; V 6 ; P 14.—The body of the female sex is not so deep as in the male, although the dorsal region is convex, resembling somewhat *C. macularius*, figured on plate xxxvii, of the Ichthyology of the United States and Mexican Boundary Survey. The dorsal and anal fin are likewise much smaller than in the male and composed each of eleven rays instead of twelve ; the upper edge of the dorsal being sublinear instead of being convex.

The ground color is olivaceous yellow with a golden reflect, much brighter beneath than above, where a greyish tint predominates. The adult male is nearly unicolor; the base of the caudal fin above is speckled with black, whilst its posterior margin is jet black. In its immature condition the male sex exhibits transverse fasciæ of blackish brown like the female, which is moreover maculated along the flanks. The base of the caudal is likewise speckled in the female, but the posterior edge of its caudal is not margined with black. On the other hand, a black spot may be seen at the posterior portion of the dorsal with specks of the same tint along its base.

We have bestowed the name of *Cyprinodon eximius* upon the species which is here described.

LXIII. The sun fish described by S. F. Baird, under the name of *Pomotis chætodon,* in the ninth annual report of the Board of Regents of the Smithsonian Institution, 1855, 324, possessing all the generical features which we have lately assigned to the genus *Bryttus* in the report upon the fishes collected during the various Pacific Railroad Surveys, that species we shall henceforwards call *Bryttus chætodon.*

LXIV. The Atlantic coast of the United States furnished a small herring, which was first indicated by Mitchill under the name of *Clupea teres.* DeKay, in his Fauna of the State of New York, has placed it in the genus *Alosa.* We have examined a series of specimens of that fish, collected by S. F. Baird, along the coast of New Jersey. The largest ones measure about four inches and a half in total length ; all of them in the most perfect state of preservation. Finding teeth upon the maxillar bones, the tongue, the palatines, and the pterygoidians, whilst the vomer is toothless, we propose referring that species to the genus *Harengula* of Prof. Valenciennes, established in the "Histoire Naturelle des poissons" upon the characters just alluded to, and to call it *Harengula teres.*

LXV.—The fresh water siluroid, described by Lesueur under the name of

*Pimelodus lemniscatus*, in the "Mémoires du Muséum d'Histoire Naturelle," belongs, truly speaking, to the genus *Noturus* of Rafinesque, and which was at one time supposed of being founded upon young specimens of Pimelodi, but is now admitted to be a distinct genus, although resembling in its full grown condition the immature state of *Pimelodus*, properly so called. The genus *Noturus* is thus made to include a second species under the name of *N. lemniscatus.* We venture to say that Lesueur's specimens were procured in Pennsylvania, and not in the southern States, as assumed by Dekay.

LXVI.—The fish described by F. B. Hough, under the name of *Pimelodus gracilis*, in the Fifth Ann. Rep. of the Reg. of the Univers. of N. Y., 1852, p. 26, is a very characteristic species, but its specific name is unfortunately preoccupied in the genus *Pimelodus.* We propose, therefore, to designate it in future under the appellation of *Pimelodus houghi.* We have examined specimens collected at Sommerville, St. Lawrence Co., N. Y. by Mr. Hough himself; others from Foxburgh, Pa., collected by S. F. Baird; and others still, from Ogdensburg: they are all preserved in the Museum of the Smithsonian Institution.

LXVII.—Dr. Hoy has collected in the neighborhood of Racine, Wis., specimens of a species of *Pimelodus*, which we propose dedicating to him; hence calling it *P. hoyi.* The head constitutes a little less than the fourth of the total length, its upper aspect being longer than broad. The upper jaw is somewhat longer than the lower one. The eyes are of medium size; their diameter entering six times and a half in the length of the side of the head, and four times in the interocular space. The anterior margin of the dorsal fin is nearer the apex of the snout than the origin of the adipose fin. The caudal is slightly emarginated, subcrescentic upon its posterior margin; it constitutes the sixth of the whole length of the fish. The anal fin is deep and rounded off upon its exterior margin; its base is somewhat less than the fifth of the entire length. The formula of the rays is:—D I, 7; A 23; C 2, 1, 7, 7, 1, 3; V 8; P I, 9. The specimens observed measure about a foot in total length; their coloration is of that uniform type common to various species.

LXVIII.—Specimens of a species, more closely allied in its general appearance to *P. hoyi* than any other of its congeners, were caught in Root River, near Racine, Wis., by S. F. Baird.

The head forms a little more than the fourth of the total length; its upper aspect is as broad as long. The jaws are equal. The eyes are of medium size, their diameter being contained eight times in the length of the side of the head, and four and a half times along the interocular space. The anterior margin of the dorsal fin is nearer the origin of the adipose than the apex of the snout. The caudal fin, which constitutes the sixth of the total length, is subcrescentic upon its posterior margin. The anal fin is deep and rounded off exteriorly; its base being contained five and a half times in the entire length. The rays are: D I, 6; A 20; C 3, 1, 8, 8, 1, 4; V 8; P I, 9.

We propose calling this species *Pimelodus confinis.*

LXIX.—A small species having the general appearance of *Pimelodus cupreus* of Rafinesque, was collected by Robert Kennicott, Aux Plaines, Ill. The chief distinguishing mark between the two species consists in the relative length of the jaws, the lower one in *P. cupreus* being shorter than the upper, whilst they are both equal in the species here alluded to, and which we call *P. cupreoides.* The head forms a little less than the fourth of the total length; it is as long as broad, and rounded off upon the snout. The eyes are of medium size: their diameter being contained seven times in the length of the side of the head, and about four times along the interocular space. The anterior margin of the dorsal fin is nearer the snout than the adipose. The caudal is posteriorly rounded off, forming a little less than the sixth of the entire length, and shorter than the base of the anal, which enters in the total length somewhat more than four times only.

The color is of a uniform, dark blackish-brown tint.

LXX.—The cat fish figured and described by DeKay, under the name of *Pimelodus catus*, Cuv. and Val., belongs to a species quite distinct from the one just alluded to. The head forms a little more than the fourth of the whole length: it is broader than long. The lower jaw is longer than the upper. The eyes are rather small; their diameter entering about nine times in the length of the side of the head, and five and a half times across the interocular space. The anterior margin of the dorsal fin is equidistant between the apex of the snout and the anterior margin of the adipose. The caudal, which forms about the sixth of the total length, is subtruncated posteriorly. The base of the anal enters likewise six times in the total length.

This species might be called *P. dekayi;* the specimens observed were collected at Oswego, Lake Ontario, and in four mile creek, near Oswego, by S. F. Baird.

LXXI.—The true *Pimelodus catus* is a southern species, widely distinct from the above. It can be distinguished by the following characters: the head is contained four times and a half in the entire length; it is as long as broad, the length being taken from snout to occiput. The jaws are equal. The eyes are small; their diameter enters also nine times in the length of the side of the head, and five and a half times across the interocular region. The anterior margin of the dorsal fin is nearer the apex of the snout than the origin of the adipose. The caudal is posteriorly rounded off, and contained five and a half times in the total length. The base of the anal enters but four times in the same length.

LXXII. The hydrographic basin of the Chesapeake has furnished a species of cat fish, popularly known as the "Channel cat," or "Mud cat." The head, which is longer than broad, forms a little less than the fourth of the total length. The upper jaw is somewhat longer than the lower one. The eyes are rather large; their diameter being contained seven times in the length of the side of the head, and four times and a half across the interocular space. The anterior margin of the dorsal fin is equidistant between the apex of the snout and the origin of the adipose. The posterior edge of the caudal is moderately emarginated; the fin itself constituting not quite the sixth of the total length. The base of the anal is somewhat shorter than the dorsal. The rays are:—D I, 5 + 1; A 20; C 3, 1, 8, 7, 1, 4; V 8; P I, 9.—The upper regions are bluish black, whilst the abdomen is whitish. Specimens were obtained in the Potomac river, in deep run, a tributary of Patapsco river, and at Carlisle, Pa.

We propose the name of *Pimelodus lynx* for this species.

LXXIII. Another species, to which we apply the name of *Pimelodus puma*, was collected by myself in Charleston, S. C. The head constitutes the fourth of the entire length; it is also longer than broad. The jaws are equal. The eyes are of medium size; their diameter entering about eight times in the length of the side of the head, and five times across the interocular space. The posterior margin of the dorsal is equidistant between the apex of the snout and the posterior flap of the adipose. The caudal is subconvex posteriorly; it constitutes about the sixth of the total length. The base of the anal does not enter quite four times and a half in the total length.

LXXIV. We have likewise collected in Charleston, S. C., a cat fish, the general form of which is more slender than that of the preceding species; the anal fin is deeper and the caudal emarginated: features which will at once differentiate the species to which we give here the name of *Pimelodus vulpeculus*. The head, which is longer than broad, constitutes the fourth of the total length. The lower jaw is somewhat shorter than the upper one. The eyes are of medium size: their diameter being contained about eight times in the length of the side of the head, and four times only across the interocular space. The anterior margin of the dorsal is somewhat nearer the apex of the snout than the adipose, which is smaller and inserted more anteriorly than in *P. puma.* The caudal fin enters five times and a half in the total length. The base of the anal is equal to the length of the caudal.

LXXV. A most characteristic species of cat fish has been collected in the neighborhood of Anderson, S. C.; specimens of which having been secured by Mrs. Daniel, were sent to Prof. S. F. Baird nearly eight years ago. The head which is longer than broad, is very much depressed, and contained about four times in the total length. The mouth is exceedingly broad and large; the jaws being equal. The eyes are large; their diameter entering six times and a half in the length of the side of the head, and three and a half times across the interocular space. The anterior margin of the dorsal fin is nearer the apex of the snout than the adipose fin. The caudal is posteriorly emarginated, and constitutes the sixth of the total length. The base of the anal is somewhat longer than the caudal.

In calling this species *Pimelodus platycephalus,* allusion is made to its most conspicuous character.

LXXVI. Specimens of a cat fish, collected in the Black Warrior and Bigsby rivers, Ala., were sent to the Smithsonian Institution by Prof. A. Winchell. The head is contained five times and a half in the entire length. The caudal fin is somewhat longer than the head. The eyes are very large; their diameter being contained but three times in the length of the side of the head: once in advance and once behind the orbit. The maxillar barbels extend beyond the middle of the length of the pectorals. The base of the anal fin enters four times in the total length of the fish. The rays are:—Br. viii: ix; D I, 6; A 28; C 10, 1, 7, 8, 1, 10; V 8; P I, 9.—The dorsal region is of a pale red; the sides of the tail are silvery; the abdomen is whitish. Brown small spots and dots are occasionally scattered over the body. The maxillar barbels are blackish.

The name of *Pimelodus megalops,* refers to the development of the eyes, although other species may possess a similar feature to a lesser degree.

LXXVII. Finally we owe to Jas. Fairie, specimens of a cat fish collected by himself at Prairie mer Rouge, La. The species being new, we call it *Pimelodus graciosus.* It has the general appearance of the preceding species, but the eyes are much smaller; their diameter entering four times in the length of the side of the head. The head itself forms the fifth of the total length. The anterior margin of the dorsal fin is nearer the apex of the snout than the origin of the adipose. The tip of the ventral fins extend beyond the origin of the anal. The rays are:—Br. vi: vi; D I, 6; A 28; C 5, 1, 7, 8, 1, 6; V 8; P I, 9.—The color is reddish brown above; the vertical fins are margined with black. The abdomen is yellowish; the horizontal fins being unicolor. The maxillar barbels are greyish black; the submaxillar ones are yellow.

The resignation of J. Aitken Meigs, M. D., as Librarian of the Academy, on account of business engagements, was accepted.

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*June 7th.*

Mr. Lea, President, in the Chair.

Fifty-four members present.

A paper was presented for publication in the Journal of the Academy, entitled Synopsis of North American Sphingidæ, by Brackenridge Clemens, M. D.